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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/558,364	11/14/2006	Gerhard Schmaus	49998	4679

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EXAMINER
HOLT, ANDRIAE M

ART UNIT	PAPER NUMBER
1616	

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02/15/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/558,364	SCHMAUS ET AL.	
	Examiner	Art Unit	
	Andriae M. Holt	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *3-10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to Applicant's amendment filed November 29, 2010. Claims 1-11 are pending in the application. Claims 1-2 and 6 have been amended. Claims 3-5 are withdrawn from consideration from the previous Office Action. Claims 7-11 are newly added.

Election/Restrictions

Newly submitted claims 7-10 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The newly added claims are directed to 2 different processes of using the tyrosinase inhibitor composition comprising a compound of formula I or styrylresorcinol. The first process, claims 7 and 9, is directed to a process for skin lightening in humans and combating age spots in human skin by administering to a person in need thereof an effective amount of the tyrosinase inhibitor or styrylresorcinol. The second process, claims 8 and 10, is directed to a process for inhibiting browning of foods comprising applying to the food an effective amount of the tyrosinase inhibitor or styrylresorcinol. These processes constitute different inventions that were not examined in the previous Office Action. In addition, the restriction requirement is based on PCT Rule 13.2; the inventions lack the same or corresponding special technical feature for the following reason: the compounds of formula 1that comprise the tyrosinase inhibitor composition are known in the art as evidenced by the teachings of the Yamamura et al. Publication (1995). Thus, a feature found in the prior art cannot be considered to be a special technical feature.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 7-10 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result**

in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

In light of Applicant's argument and upon further consideration, the examiner will withdraw the restriction requirement for Groups II, III, and IV, claim 3-5.

Claims 1-11 are pending in the application. Claims 7-10 are withdrawn from consideration. Claims 1-6 and 11 will presently be examined to the extent they read on the elected subject matter of record.

Status of the Claims

Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

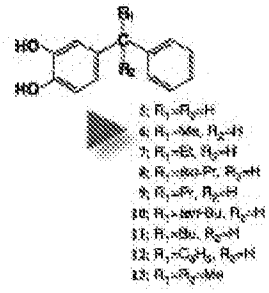
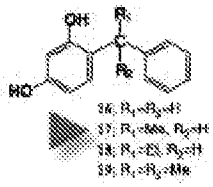
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by the Yamamura et al. Publication (1995) as evidenced by Collington (WO 00/56279).

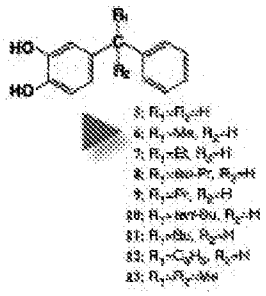
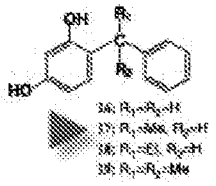
Yamamura et al. disclose the antioxidant activities of the dihydric phenols, such as catechol, resorcinol, and hydroquinone, containing alkyl and benzyl groups as substrates (page 2955, col. 2, first full paragraph). Yamamura et al. disclose

compounds 6  and 17  , which read on applicant's elected invention wherein, R2 is hydrogen and R3 is methyl. The -OH substituents can be located at any position on the benzene ring. In reference to the intended use of the compounds of formula I for skin lightening in human skin, hair lightening in humans, combating age spots in human skin, or inhibiting browning in foods, it is duly noted that the compounds of the prior art are the same as Applicant's compounds. Thus, the skilled artisan would recognize that a compound is inseparable from its properties. Hence, all the properties associated with Applicant's compounds, skin lightening in humans, hair lightening in humans, combating age spots in human skin or inhibiting browning in foods would also be possessed by the compounds of the prior art. In addition, as evidenced by the disclosure Collington, (WO 00/56279), resorcinol derivatives, tyrosinase inhibitors, which have the same dihydroxyphenyl core are used for lightening skin or reducing the pigmentation of skin in a human (page 3, lines 1-26).

Yamamura et al. meet all the limitations of the claims and thereby anticipate the claims.

Response to Arguments

Applicant's arguments filed November 29, 2010 have been fully considered but they are not persuasive. Applicant argues that Yamamura et al. is not concerned with a tyrosinase inhibitor composition and does not disclose or suggest a topical composition

containing the compound of Formula I or styrylresorcinol in an amount effective for lightening skin and combating age spots. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., topical composition) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant's claims are directed to a tyrosinase inhibitor composition comprising a compound of the formula I, not a topical composition containing the compound of Formula I. The tyrosinase inhibitor composition comprises only one component, a compound of Formula I. Yamamura et al. teaches the specific compound of formula I elected by Applicant wherein R2 is hydrogen and R3 is methyl. As noted in the previous Office Action, compounds are inseparable from their properties, as the compounds of the instant application and the compounds disclosed in Yamamura et al. are identical compounds, compounds 6  and 17  , the compounds of the prior art would have the same properties as the claimed compounds. In addition, the compounds would be capable of serving the

same intended use of lightening skin, combating age spots, and inhibiting browning in foods.

Applicant also argues that Collington does not provide the deficiencies of Yamamura in that Collington does not suggest the claimed compounds. In response to Applicant's argument, Collington was merely added as evidence to disclose that resorcinol derivatives, tyrosinase inhibitors, which have the same dihydroxyphenyl core, are used for lightening skin or reducing the pigmentation of skin in a human. The compounds disclosed in Yamamura have the same dihydroxyphenyl core, are resorcinol derivatives, and thus, would possess the same properties as other resorcinol derivatives.

The claims remain rejected.

New Rejections Necessitated by Amendment filed November 29, 2010

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: active steps for preparing an agent. The claim does not provide active steps for preparing an agent, such as mixing. The claim does recite "by adding thereto a compound of the Formula I". However, it is unclear

what "thereto" is meant to convey. In addition, when one skilled in the art reads "a process for preparing an agent", the skilled artisan is looking for steps on “how” to prepare the agent, i.e., mixing with components to prepare the final product. Applicant should provide steps as to "how" to prepare the agent.

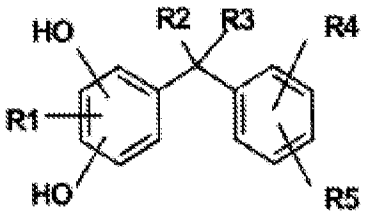
Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2, 6, and 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 and 12 of copending Application No. 12/159,886 (‘886). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a tyrosinase inhibitor comprising a compound of formula (1)

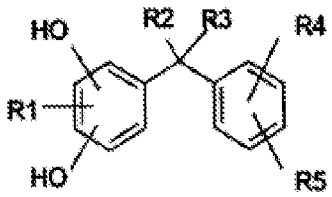


1

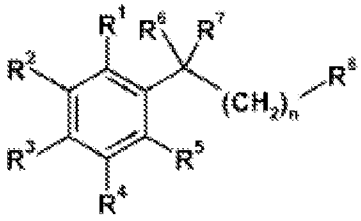
. Claim 2 of the instant application and co-pending application ‘886 indicate that the compound of formula 1 is styrylresorcinol. The instant application does not indicate the addition of an oily phase in the formulation. However, Applicant is using open terminology (the term comprising) which allows any substance or acceptable excipient or diluent to be added to the composition, including the additional components recited in newly added claim 11. Therefore, it would have been obvious to the skilled artisan to add an oily phase to the tyrosinoase inhibitor of the instant application as this is a known practice in the cosmetic, food, and pharmaceutical arts. For these reasons, one of ordinary skill in the art would conclude that the invention defined in the instant claims would have been an obvious variation of the invention defined in the claims of the cited copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2 and 6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 17 and 19 of copending Application No. 12/159,866 (‘866). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a composition comprising a tyrosinase inhibiting amount one or more



compounds of formula 1 of the instant application and



compounds of formula (I) (I) of co-pending application '866.

Claim 2 of the instant application and claims 4 and 5 of co-pending application '866 indicate the compound of formula (I) is styrylresorcinol. The instant application does not indicate the addition of component b), one or more compounds of formula (II). However, Applicant is using open terminology (the term comprising) which allows any substance, including other active compounds to be added to the composition. Therefore, it would have been obvious to the skilled artisan to add an additional active compound to the tyrosinoase inhibitor of the instant application as this is a known practice in the cosmetic and pharmaceutical arts to improve and/or enhance the activity of the active compounds. For these reasons, one of ordinary skill in the art would conclude that the invention defined in the instant claims would have been an obvious variation of the invention defined in the claims of the cited copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2 and 11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1of copending Application No. 12/159,951 ('951). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a preparation comprising a tyrosinase inhibiting amount of styrylresorcinol. Independent claim 1 of the instant application does not specifically disclose the tyrosinase inhibitor is styrylresorcinol, however, claim 2 of the instant application indicates that the compound of formula 1 is styrylresorcinol. The instant application does not indicate the addition of component b), a skin-and/or hair lightening and/or senile keratosis-reducing amount of one or more compounds selected from the group consisting of chelating agents, phenolic derivatives, and/or organic acid derivatives in independent claim 1. However, newly added claim 11 of the instant application provides for the addition of a fragrance, a compound for the care and/or cleansing of skin and/or hair, and a UV absorbing agent. In addition, Applicant is using open terminology (the term comprising) which allows any substance, including other active compounds to be added to the composition. Therefore, it would have been obvious to the skilled artisan to add an additional active compound to the tyrosinoase inhibitor of the instant application as this is a known practice in the cosmetic and pharmaceutical art to improve and/or enhance the activity of the active compounds. For these reasons, one of ordinary skill in the art would conclude that the invention defined in the instant claims would have been an obvious variation of the invention defined in the claims of the cited copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed November 29, 2010 have been fully considered but they are not persuasive. Applicant argues that the examiner cannot assert that an additional component is a distinct invention for purposes of restriction practice and then contend the components are obvious to support an obviousness-type double patenting rejection. In response to Applicant's argument, co-pending Applications 12/159,886 (‘886), 12/159,866 (‘866), and 12/159,951 (‘951) are obvious variants of the instant application for the reasons set forth in the obviousness-type double patenting rejections, herein above. It would have been obvious to the skilled artisan to add additional active compounds to the tyrosinase inhibitor of the instant application as this is a known practice in the cosmetic and pharmaceutical art to improve and/or enhance the activity of the active compounds. The restriction requirement is based on PCT Rule 13.2; the inventions lack the same or corresponding special technical feature for the following reason: Applicant has claims to different inventions. Group I is a tyrosinase inhibitor comprising a compound of formula 1. Whereas, Groups II-IV are three different compositions, fragrance, cosmetic, and sunscreen that each require a different component (1) to make the formulation, a fragrance, a cleansing component or a UV filter, respectively. Thus, a claim to different inventions cannot be considered to be a special technical feature. The restriction requirement is a separate rejection from the obviousness-type double patenting and is proper. The co-pending applications are not

related divisional applications of the instant application, therefore, based on the rationale set forth in the rejection the obviousness-type double patenting rejection is also proper. The claims remain rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6, and 11 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kondo et al. (JP 11-255,637) in view of Yamamura et al. Publication (1995). Computer translation of JP 11-255,637 is used for translation purposes of the reference listed on the IDS filed August 17, 2009.

Applicant's Invention

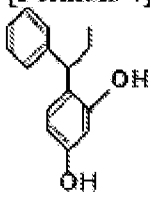
Applicant claims a tyrosinase inhibitor comprising a compound of the Formula I. Applicant claims a tyrosinase inhibitor comprising styrylresorcinol. Applicant claims the tyrosinase inhibitor is used in an effective amount for lightening human skin and/or hair, combating age spots in human skin, and/or inhibiting browning in foods.

Determination of the scope of the content of the prior art (MPEP 2141.01)

Kondo et al. teach cosmetics using tyrosinase activity inhibitor are available as active principles, used as a prevention of silverfish of the skin, a freckle and whitening cosmetics (page 1, paragraph 1, translation). Kondo et al. teach the purpose of the invention controls strongly the tyrosinase activity which participates in melanin generation, and that the tyrosinase activity inhibitor can be used for skin-whitening cosmetics (page 1, paragraph 3, translation). Kondo et al. teach that the tyrosinase activity inhibitor contains one of the flavonoids shown in formulas (1)-(9). Kondo et al. teach that in formulas (1)-(9) R can be the same or is different and can be chosen from an alkyl group of the carbon numbers 1-9 and n shows the integer of 0-3. Kondo et al. teach that since these substituents are within the limits of R of there are the cases (n=0) where R is not included. Kondo et al. teach that they show the similarly outstanding tyrosinase activity inhibition ability. Kondo et al. teach that the concrete flavonoids which can be used can be easily designed and compounded within the limits of R by a publicly known method (page 3, paragraph 9, translation). Kondo et al. teach that the cosmetics contain tyrosinase activity inhibitor as an essential ingredient and can show the melanin

generation depressant action based on tyrosinase activity inhibitory action and can be used to make whitening cosmetics (page 4, paragraph 12). Kondo et al. teach in example 1 the compound of formula (1) was prepared with working example 1 by conventional method and the sample the flavonoids shown with the formula (4)

[Formula 4]



was made (page 5, paragraphs 19-20, translation). Kondo et al. teach that various materials other than the tyrosinase activity inhibitor can be blended with the cosmetics. Kondo et al. teach that a desired effect can be synergistically raised by blending known whitening agents and moisturizers (page 4, paragraph 13). Kondo et al. teach that perfume can be added to the formulations (page 4, paragraph 15). Kondo et al. further teach that ultraviolet ray adsorbents such as 4-metoxybenzophenone can be added to the formulations (page 4, paragraph 16).

Ascertainment of the difference between the prior art and the claims (MPEP 2141.02)

Kondo et al. do not explicitly disclose the tyrosinase inhibitor comprising styrylresorcinol or provide working examples of the addition of a fragrance, one or more compounds for the care and/or cleansing of skin and/or hair, or an effective amount of a UV filter. It is for this reason the Yamamura et al. Publication is added as a secondary reference.

The teachings of the Yamamura et al. Publication with respect to the 35 U.S.C. 103(a) rejection is hereby incorporated and are therefore applied in the instant rejection as discussed above.

Finding of prima facie obviousness
Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kondo et al. and the Yamamura et al. Publication and use styrylresorcinol as the tyrosinase inhibitor. Kondo et al. teach that compounds of formulas (1)-(9) strongly control the tyrosinase activity which participates in melanin generation, and therein provides a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics. One skilled in the art at the time the invention was made would have been motivated to modify the teaching of Kondo et al. and use styrylresorcinol, in which R3 is methyl, as the tyrosinase inhibitor to lighten human skin. In view of the close structural similarity between the claimed compounds, as evidenced by the teachings of Yamamura et al., and compound 4 taught by Kondo et al., and the fact that the latter is taught to be a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics, one of ordinary skill in the art would have been motivated to make the claimed compounds in the expectation that it too would serve as a skin-whitening cosmetics. The compound of formula (1) of the instant application and the compound of formula 4 taught by Kondo et al. are related as homologs. Hence, the Examiner has established that the use of styrylresorcinol as the tyrosinase inhibitor to lightening human skin is prima facie obvious over Kondo et al. because adjacent

homologs are prima facie obvious. In re Henze, 85 USPQ 261 (C.C.P.A. 1950) and In re Wood, Whittaker, Stirling, and Ohta, 199 USPQ 137 (C.C.P.A 1978).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kondo et al. and the Yamamura et al. Publication and add a fragrance, one or more compounds for the care and/or cleansing of skin and/or hair, or an effective amount of a UV filter. Kondo et al. teach that other agents, such as, perfume, moisturizers, and ultraviolet ray absorbents, can be added to the tyrosinase activity inhibitors, including the compound of formula 4 disclosed by Kondo, which reads on Applicant's compound of formula I in claims 3-5, wherein R3 is methyl or straight-chain or branched, alkyl having 2-5 carbon atoms. One skilled in the art at the time the invention was made would have been motivated to add the additional components to the tyrosinase activity inhibitor of formula I to produce a fragrance composition, a cosmetic composition, and a sunscreen formulation as claimed in claims 3, 4, and 5 respectively, because Kondo specifically teaches and discloses various materials that can be blended with the tyrosinase activity inhibitor to produce a wide variety of cosmetic formulations. Therefore, the skilled artisan would have been motivated to add the additional components to the formulation with a reasonable expectation of success because the addition of fragrance, compounds for the care of the skin and UV filters, is a known practice in the cosmetic art as evidenced by the teachings of Kondo et al.

Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited references.

Response to Arguments

Applicant's arguments filed November 29, 2010 have been fully considered but they are not persuasive. Applicant argues that in view of the limited number of compounds described y Kondo et al., it would not have been obvious to one of ordinary skill in the art to modify Kondo et al. to attain the claimed composition including a tyrosinase inhibitor of Formula I as recited in claim 1. Applicant further argues that Yamamura et al. has no relation to a tyrosinase inhibitor composition and that the broad disclose of various antioxidant compounds of Yamamura et al. provides no suggestion to one skilled in the art to modify the specifically defined compounds of Kondo et al. Applicant argues that Kondo et al. clearly does not disclose the tyrosinase inhibitor composition including styrylresorcinol as in claim 2. In response to Applicant's argument, Applicant has amended independent claim 1 to wherein R3 is methyl, styrylresorcinol. Kondo et al. teach that compounds of formulas (1)-(9) strongly control the tyrosinase activity which participates in melanin generation, and therein provides a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics. One skilled in the art at the time the invention was made would have been motivated to modify the teaching of Kondo et al. and use styrylresorcinol, in which R3 is methyl, as the tyrosinase inhibitor to lighten human skin because of the close structural similarity between the claimed compounds. As evidenced by the teachings of Yamamura et al.,

and compound 4 taught by Kondo et al., and the fact that the compound 4 of Kondo et al. is taught to be a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics, one of ordinary skill in the art would have been motivated to make the claimed compounds in the expectation that it too would serve as a skin-whitening cosmetic. The compound of formula (1) of the instant application, R3 is methyl, and the compound of formula 4, R3 is ethyl, taught by Kondo et al. are related as homologs. Hence, the Examiner has established that the use of styrylresorcinol as the tyrosinase inhibitor to lightening human skin is prima facie obvious over Kondo et al. because adjacent homologs are prima facie obvious. In re Henze, 85 USPQ 261 (C.C.P.A. 1950) and In re Wood, Whittaker, Stirling, and Ohta, 199 USPQ 137 (C.C.P.A 1978).

Applicant argues that Kondo et al. and Yamamura et al. do not suggest a process for preparing an agent for the treatment against skin and hair browning and combating age spots or inhibiting browning of foods using the compound of Formula I. In response to Applicant's argument, Claim 6 is a process for preparing an agent, wherein the agent is a compound of Formula I. Applicant is arguing an intended use of a compound of the Formula I. As noted above, Applicant has amended independent claim 1 to wherein R3 is methyl, styrylresorcinol. Kondo et al. teach that compounds of formulas (1)-(9) strongly control the tyrosinase activity which participates in melanin generation, and therein provides a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics. One skilled in the art at the time the invention was made would have been motivated to modify the teaching of Kondo et al. and use styrylresorcinol, in which R3 is methyl, as the tyrosinase inhibitor to lighten human skin.

In view of the close structural similarity between the claimed compounds, as evidenced by the teachings of Yamamura et al., and compound 4 taught by Kondo et al., and the fact that the latter is taught to be a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics, one of ordinary skill in the art would have been motivated to make the claimed compounds in the expectation that it too would serve as a skin-whitening cosmetic. The compound of formula (1) of the instant application, R3 is methyl, and the compound of formula 4, R3 is ethyl, taught by Kondo et al. are related as homologs. Hence, the Examiner has established that the use of styrylresorcinol as the tyrosinase inhibitor to lightening human skin is prima facie obvious over Kondo et al. because adjacent homologs are prima facie obvious.

None of the claims are allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andriae M. Holt whose telephone number is 571-272-9328. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Andriae M. Holt
Patent Examiner
Art Unit 1616

/John Pak/
Primary Examiner, Art Unit 1616